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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/644,932

**Applicant(s)**

GAUTHIER ET AL.

**Examiner**

WANDA Z. RUSSELL

**Art Unit**

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24, 27, 30-32 and 34-40 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-24, 27, 30-32 and 34-40 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-24, 27, 30-32, and 34-40** are rejected under 35 U.S.C. 102(b) as being anticipated by Han et al. (U.S. Patent 6,430,200 B1).

For **claims 1, 10, 17, 27, 30, and 35**, Han et al. teach a device (apparatus, see Title), a method (see Title), a system (see Fig. 2), and a base station (Fig. 2 is a base station, see col. 4, lines 15-17 for description of Fig. 2) for integration into a base station of a type that includes at least one radio-transceiver (see 300, 310, and 330 in Fig. 2) for receiving and transmitting radio communications (see Fig. 2) to a plurality of subscriber stations, the device comprising:

an input device (see Modem 200/210 in Fig. 2) configured to be coupled to the at least one radio-transceiver (see 200/210 – 100 – 500 in Fig. 2) for receiving a handoff signal (The digital hardware MODEM is used for a hand-off, see col. 2, lines 66-67) from the at least one radio-transceiver (transceiver is for both transmitting and receiving) at a first mode respective to a first coverage area of the communication system (service path unit for generating a frequency which is utilized for actual communication ... RF path unit for producing frequency which is utilized for generating a pilot signal ... coverage areas of multiple frequencies, refer to col. 5, lines 9-17; pilot signal of a target base

station, see col. 3, lines 59-60, and Fig. 2. It can be seen that the frequency #1 covers first area that is the target);

an output device (see 500/510 in Fig. 2) for delivering the handoff signal at a second mode (producing frequency #2, see Fig. 2) respective to a second coverage area (coverage areas of multiple frequencies, refer to col. 5, lines 9-17, and frequency #2, see col. 4, line 64 & lines 61-64, and Fig. 2. It can be seen that the frequency #2 covers second area);

a converter (see 100 working with 500 in Fig. 2) coupled to said input device and said output device (see Fig. 2. 100 is coupled to 200 and 500) for translating the handoff signal from the first mode into the second mode (from FA #1 into FA #2 in Fig.2); the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first mode (The digital MODEM 200 coupled to the IF amplifier/divider 100 transmits all signals converted by an overhead channel or traffic channel. Accordingly, the RF path unit 530 can balance coverage areas of multiple frequencies by transmitting both signals converted by an overhead channel and traffic channel, refer to col. 5, lines 14-17; The digital hardware MODEM is used for a hand-off, see col. 2, lines 66-67; and when a hand-off is performed over two sectors, the system is designed such that transceivers and power amplifiers of the two sectors are connected to one path of the IF amplifier/divider 100, see col. 5, lines 33-36. Also see Fig. 2. It can be seen that the mobile switches from the second mode -frequency #2- to the first mode -frequency #1-).

For **claims 2, 11, 18, 31, and 37**, Han et al. teach the device wherein said first coverage area and said second coverage area of said system are each based on a respective protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA (CDMA, see col. 1, line 21).

For **claims 3, 12, 19, and 38**, Han et al. teach the device wherein said protocols respective to said coverage areas are different (coverage areas of multiple frequencies, refer to col. 5, line 17).

For **claims 4, 13, 20, and 39**, Han et al. teach wherein said handoff signal is a conventional CDMA re-direction signal (CDMA, see col. 1, lines 10-12), and wherein said first mode is a first frequency and said second mode is a second frequency different from said first frequency (see FA #1 and #2 in Fig. 2).

For **claims 5 and 14**, Han et al. teach the device wherein said first coverage area and said second coverage area are served by respective CDMA base stations (hand-off in a CDMA system ... when a mobile station travels from a "source base station" to a "target base station", see col. 1, lines 10-12 & 25-26).

For **claims 6, 15, 21, and 36**, Han et al. teach the device wherein said output device is configured to transmit said handoff signal to a base station power combiner for delivering said converted handoff signal to a base station antenna for outputting said handoff signal (see 430 in Fig. 2).

For **claims 7 and 22**, Han et al. teach the device wherein said converter comprises a down-converter (see divider 100 in Fig. 2) configured to receive said handoff signal from said input device and for converting said handoff signal from said

first frequency to an intermediate frequency and an up-converter for converting said intermediate frequency to said second frequency (see 500 in Fig. 2, and a pilot signal generator ... to perform an inter-frequency hard hand-off operation ... comprises an intermediate frequency (IF) amplifier/divider; ... a service radio frequency (RF) path unit for up-converting a first portion of the divided signal into a radio frequency and transmitting the radio frequency, see col. 3, lines 28-38).

For **claims 8 and 23**, Han et al. teach the device further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable (it is inherent that an user and base station can exchange information to make is user selectable, see Jonsson reference, cited before, col. 8, lines 18-25 as evidence).

For **claims 9 and 24**, Han et al. teach the device wherein said microcontroller is further configured to perform at least one of logging various conversions performed by said converter (Official Notice is taken that the concept and advantage of that any information can be stored or logged are well known and expected in the art), and generating alarms if said converter operates outside of desired specifications (a buzzer to notify a user, see col. 7, lines 1-5).

For **claim 16**, Han et al. teach the method further comprising receiving an input signal identifying at least one said frequencies for use in performing a reminder of the steps (allows a mobile station to continue communication when the mobile station travels between several service cells, see col. 1, lines 18-20; and A hard hand-off is generally performed as follows. The source base station continuously measures the

signal strength of a mobile station within its cell region to determine if the signal strength drops below a predetermined threshold value. When the received signal strength falls below the threshold, the source base station determines that the mobile station is located at the boundary of its cell region, and then signals a base station controller (BSC). The BSC then decides which base station (i.e. target base station) receives a relatively strong signal from the mobile station, see col. 1, lines 47-56).

For **claim 34**, it is a combination of claims 1, 4, and 7, therefore it is rejected for the same reason above.

For **claim 40**, Han et al. teach the base station according to claim 39 wherein said base station is a first CDMA base station and said second coverage area is served by a second CDMA base station different from said first CDMA base station (performing a hard hand-off in a code division multiple access (CDMA) cellular system, see col. 1, lines 10-12, and 25-26).

### ***Response to Arguments***

3. Applicant's arguments, filed 5/7/2009, have been fully considered, but are not persuasive.
4. For claim 1, Applicant argues that Han et al. do not teach "switch' from the "second mode" to the "first mode".

In response, the Examiner respectfully disagrees.

Han et al. teach the digital MODEM 200 coupled to the IF amplifier/divider 100 transmits all signals converted by an overhead channel or traffic channel. Accordingly, the RF path unit 530 can balance coverage areas of multiple frequencies by transmitting

both signals converted by an overhead channel and traffic channel, refer to col. 5, lines 14-17; The digital hardware MODEM is used for a hand-off, see col. 2, lines 66-67; when a hand-off is performed over two sectors, the system is designed such that transceivers and power amplifiers of the two sectors are connected to one path of the IF amplifier/divider 100, see col. 5, lines 33-36; and coverage areas of multiple frequencies, refer to col. 5, lines 9-17. Also see Fig. 2. It can be seen that the mobile switches from the second mode -frequency #2- to the first mode -frequency #1-. The examiner added more details to clarify the rejection. See rejection above.

5. Other independent claims have the same issues as discussed above.
6. Rejections of dependent claims remain effective. See details above.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/  
Supervisory Patent Examiner, Art  
Unit 2416

/Wanda Z Russell/  
Examiner, Art Unit 2416